CONTENTS

Volume 4, Issue Nos. 1–6

International Journal of

ADAPTIVE CONTROL AND SIGNAL PROCESSING

Issue No. 1, January–February 1990

Decentralized Stochastic Adaptive Control of Interconnected Systems: M. S. Radenković 1

An Adaptive Non-linear Estimate for Radar Target Tracking: C. H. Hsiao and K. C. Chuang 17

Boundedness Conjecture for an Output Error Adaptive Algorithm: D. A. Schoenwald and P. V. Kokotovic 27

Identification/Prediction Algorithms for ARMAX Models with Relaxed Positive Real Conditions: J. B. Moore, M. Niedzwiecki and L. Xia 49

Performance Enhancement of Two-degree-of-freedom Controllers via Adaptive Techniques: T. T. Tay and J. B. Moore 69

BOOK REVIEWS 85

Issue No. 2, March–April 1990

Special Issue: Adaptive Controller Designs
Guest Editors: M. K. Masten and H. E. Cohen

EDITORIAL 87

An Advanced Showcase of Adaptive Controller Designs: M. K. Masten and H. E. Cohen 89

Application of Robust and Adaptive Pole Placement: K. J. Åström 99

Robust Adaptive Control Using a Combined Approach: K. S. Narendra and J. D. Bošković 111

Further Evaluation of Partial State Model Reference Adaptive Design: M. M'Saad, I. D. Landau and M. Samaan 133

Illustration of an Integrated Approach to Adaptive Control: G. C. Goodwin, B. Ninness, R. Cockerell and M. Salgado 149

An Advanced Example of Direct Adaptive Control System Design: D. R. Mudgett and A. S. Morse 163

Application of Linear Adaptive Control to Some Advanced Benchmark Examples: C. D. Johnson 171

BOOK REVIEWS 183

Issue No. 3, May–June 1990

On the Implementation of Predictive Adaptive Control by Adaptive Predictors: L. Chisci, G. Zappa and E. Mosca 187

Partial Convergence of Extended Least Squares for Insufficiently Excited Linear Systems: M.-C. Viano 207

Frequency-dependent Bursting in Adaptive Echo Cancellation and its Prevention Using Double-talk Detectors: Z. Ding, C. R. Johnson and W. A. Sethares . . 219

TECHNICAL NOTE

A Counterexample to the Exponential Convergence of the Directional Forgetting Algorithm: S. Bittanti, P. Bolzern and M. Campi 237

BOOK REVIEWS 245

Issue No. 4, July–August 1990

Improved Method for Designing Linear Distributed Feedback Systems: M. Kelemen, Y. Kannai and I. Horowitz 249

A New Algorithm for Constrained Adaptive Array Processing: Y. M. Zhu and G. Yin 259

A Bayes-closed Approximation of Recursive Non-linear Estimation: R. Kulhavý . 271

On the Adaptive Control of Remotely Operated Underwater Vehicles: K. R. Goheen and E. R. Jefferys 287

Extended Self-tuning Predictors, Smoothers and Filters for Two-dimensional Data Fields: G. R. Wagner and P. E. Wellstead 299

BOOK REVIEWS 331

Issue No. 5, September–October 1990

An Adaptive Filter for Time-varying-parameter Models: A. Abutaleb and M. Papaioannou 335

Indirect Adaptive State Feedback Control of Linearly Parametrized Non-linear Systems: G. Campion and G. Bastin 345

Robust Stability of Multi-loop Continuous Time Self-tuning Controllers: P. J. Gawthrop 359

On the Persistency of Excitation for Systems Having Purely Deterministic Disturbances Using the RLS Algorithm: R. Cristi and A. Feuer 383

Factorizations that Relax the Positive Real Condition in Continuous-time and Fast-sampled ELS Schemes: V. Krishnamurthy, B. Wahlberg and J. B. Moore . 389

On the Stability of Decentralized Discrete Adaptive Control Systems: P. Wiemer and H. Unbehauen 415

BOOK REVIEW 439

Issue No. 6, November–December 1990

Special Issue: Non-linear and Adaptive Robot Control
Guest Editors: R. Ortega and R. Kelly

EDITORIAL 441

Computed Torque Control via a Non-linear Observer: C. Canudas de Wit, K. J. Astrom and N. Fixot 443

New Results on the Structure of Non-linear Systems: Application to the (Dynamic) Block-decoupling Problem: J. Descusse 453

An H_∞ Approach to Learning Control Systems: F. Padieu and R. Su 465

A Method for the State Estimation of Elastic Joint Robots by Global Position Measurements: S. Nicosia and P. Tomei 475

A Unified Perspective on Robot Control: The Energy Lyapunov Function Approach: J. T. Wen 487

Robot Non-linearity Bounds Evaluation Techniques or Robust Control: W. M. Grimm 501

Some Remarks on the Convergence Analysis of Adaptive Controllers for Robot Manipulators: G. N. Maliotis, D. M. Dawson and F. L. Lewis. 523

Learning Control Theory for Robotic Motion: S. Arimoto 543

Controllers which Guarantee Robustness with Respect to Unmodelled Flexibilities for a Class of Uncertain Mechanical Systems: M. Corless 565

CONFERENCE DIARY 581

AUTHOR INDEX 582

KEY WORD INDEX 583